The Internet of Things for Insurance: Demystifying the role of telematics

Geoff Werner FCAS MAAA – Willis Towers Watson
Zack Schmiesing - Verisk
2017 Underwriting Collaboration Seminar
At a glance...

• The increased integration of 'smart' devices through internet of things (IoT) technologies are quickly changing the way we travel, the way we work, and way we live – all of which impact insurance decision making for buyers and sellers.

• OEMs, technology providers, and data stewards stand to benefit depending on the business model they embrace, but success ultimately hinges on benefits to the policy holder.

• Explosive expansion, portability, agility, and innovation of data and analytics present challenges that are somewhat familiar but never the less crucial to successfully integrate a data-driven IoT insurance strategy.
The Internet of Things: Expected to outpace traditional devices

2016
First time Internet-connected devices outpace traditional devices

2018
17 billion connected devices

2019
25 billion connected devices

2020
50 billion connected devices (6 for every person on the planet)

2020
40,000 exabytes of data from the IoT (1 trillion gigabytes = 1 exabyte)

IoT expected to add $10 – 15 trillion to global GDP over the next 20 years

1 Gartner, IDC, Strategy Analytics, Machina Research, company filings, BI Intelligence estimates
2 Cisco Seize New IoT Opportunities with the Cisco IoT System
3 IDC The Digital Universe, BI Intelligence estimates
4 GE Analyze This: The Industrial Internet by the Numbers & Outcomes
Market Challenges for Insurers:

What keeps Insurers up at night

- Managing profitability
- Regulatory environment
- Evolving Sales Channel
- Competition and retention
- Potential maturing product

Proven Solutions to Insurance Market Challenges

- (Easy) Access to more data
- Accurate, Validated exposure info
- Analysis + Integrated Insight
- Growth Channels
- Operational Efficiency
Insurance Industry Workflows

• **Underwriting:**
  Decision-making support tools and information; analog, or simplified indicators to drive policy decisions

• **Rating:**
  Combines loss experience with underwriting data to create predictive modeling guidance – going deeper into behavior

• **Claims:**
  Answers the 5 w’s; point in time and space with unexpected behavior/response; *Loss Control*
IoT Eco-system

Insurance Eco-System

Personal Lines
- Auto Coverage
- Homeowners Coverage
- Privacy???

Commercial Lines
- Fleet/Auto Coverage
- Property Coverage
- Contents Coverage
- Business Interruption
- General Liability
- Workers Compensation
How does UBI work (today)?

1. Consumer opts for UBI in exchange for a teaser discount
2. Insurer provides a sensor to measure driving and provide services
3. Insurer calculates a specific discount for future application
What do the numbers say?

88% of Millennials would consider a UBI policy

30%+ Improvement in driving behaviors

40 point increase in satisfaction of UBI policyholders (JD Power, 1000 point scale)

48 states have 10+ UBI programs today

10-20% in UBI programs today

Why isn’t every policy a UBI policy today?

- Technology cost
- Operational friction
- Consumer uncertainty and data portability
Over 70% already have smartphones

By 2020 90% of new cars will be connected

Could this help solve the “issues”?

“Data suppliers” want to create revenue and increase customer value

1. Own-branded insurance
2. Lead generation
3. Data exchange
Lead generation model

**Customer**
- Understand driving behavior
- Transparent and controlled access to tailored insurance
- Score is portable (within partner insurers)

**Data Supplier**
- New revenue stream
- Provides recognizable value for their customers

**Insurer**
- Reduced cost and friction
- Access to powerful data at time of sale for leads
- New distribution channel
- Potential for higher price competition

© 2017 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only.
Data exchange model

Customer
- Understand driving behavior
- Score is portable
- Potential for less control and transparency

Supplier
- New revenue stream
- Value to customer less visible and could be negative impact

Insurer
- Reduced cost and friction
- Access to powerful data at time of sale for entire population
- Most consistent with today’s operations
What are some of the challenges on the road ahead?

• Business expertise

• Analytical challenges

• Scalability: the many to many challenge

• Consumer concerns

• Unforeseen hurdles?
What are some of the challenges on the road ahead?

- **Business expertise**
- **Analytical challenges**
- **Scalability: the many to many challenge**
- **Consumer concerns**
- **Unforeseen hurdles?**
What are some of the challenges on the road ahead?

- Business expertise
- Analytical challenges
  - Scalability: the many to many challenge
- Consumer concerns
- Unforeseen hurdles?
Making sense of the data

Predicting market leaders
Venture capital is available for this market, and start-ups pop up daily.

A complex connected ecosystem
Identifying sources of data can be difficult when multiple players are involved: hardware manufacturers, platform owners, etc.

Variety of devices
Technology is changing the way we live our lives. Analysts estimate 50 billion devices will be connected to the Internet by 2020. 

Big data
Depending on the volume, variety, and velocity of data, insurers could expect over 10MB of data per household per day.

Unwieldy and unstructured
Understanding data from multiple sensors and how it correlates to future loss is a moving target that requires expertise.

Source: Cisco
Building an optimal rating plan

The “winners” will be the insurers who are best able to optimize the combination of traditional and emerging factors

<table>
<thead>
<tr>
<th>Traditional Proxy Factors</th>
<th>Telematics data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender, age and marital status</td>
<td>How much, how, when &amp; where</td>
</tr>
<tr>
<td># vehicles and # drivers</td>
<td>How much</td>
</tr>
<tr>
<td>Estimated annual miles</td>
<td>How much</td>
</tr>
<tr>
<td>Territory</td>
<td>Where</td>
</tr>
<tr>
<td>Accidents and convictions</td>
<td>How</td>
</tr>
<tr>
<td>Insurance score</td>
<td>How</td>
</tr>
</tbody>
</table>
What are some of the challenges on the road ahead?

- Business expertise
- Analytical challenges
- Scalability: the many to many challenge
- Consumer concerns
- Unforeseen hurdles?
Many-to-Many Problem

Telematics/ IoT Solution Providers:
- Value of insurance industry vertical unknown
- Limited bandwidth to span relationships with multiple insurers
- Only engaged with a fraction of insurance industry, leaving much of the market “untapped”, including loss of revenue for not sharing data to inform claims for insurers
- Cost-prohibitive to create integration with numerous individual insurers
- Lacks insurance analytics expertise

Insurers:
- Fragmented market — technology winners TBD
- Data is unfamiliar, unstructured, and inconsistent, making insight creation difficult, lengthy, and costly
- Inability to systematically validate existence of technology and audit discount eligibility
- Inability to use data and insights in workflows
- Cost and time it takes to manage claims and customer satisfaction
What are some of the challenges on the road ahead?

• Business expertise

• Analytical challenges

• Scalability: the many to many challenge

• Consumer concerns

• Unforeseen hurdles?
What are some of the challenges on the road ahead?

• Business expertise

• Analytical challenges

• Scalability: the many to many challenge

• Consumer concerns

• Unforeseen hurdles?
Discussion

Zack Schmiesing
Director | Commercial Lines Underwriting
1712 N Wood St
Chicago - IL

T +1 614.699.2250
E Zschmiesing@verisk.com

Geoff Werner
Global Telematics Leader
444 College Blvd
San Antonio, TX 78209

T +1 210 269 8633
E geoff.werner@willistowerswatson.com